

What is claimed is:

1. A method of compensating within a receiving endpoint for lost audio packets transmitted across an IP network, comprising the steps of:

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storing a packet buffer of samples as a plurality of sub packets within a buffer;

inserting at least one interpolated sub packet between successive sub packets in said buffer; and

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playing out said sub packets from said buffer.

2. The method of claim 1, wherein each said interpolated sub packet comprises a weighted average of present and next ones of said successive sub packets to be played out of said buffer such that first samples of the interpolated sub packet resemble first

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3. The method of claim 2, wherein said weighted average is:

$P_{Nm=0-(M-1)} = (mP_m + (M-m)N_m)/M$, wherein $P_{0-(M-1)}$ represents samples 0 to (M-1) of M samples of the present sub packet, and $N_{0-(M-1)}$ represents samples 0 to (M-1) of M samples of the next sub packet.

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4. The method of claim 3, wherein each said interpolated sub packet is inserted as follows:

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#define SUB_PACKET_SIZE 8          /* In samples */
int current_sp[ SUB_PACKET_SIZE ];
int nex_sp[ SUB_PACKET_SIZE ];

void smooth_sub_packet( void )
{
    current_sp[0] = (current_sp[0] + 3 * next_sp[0]) >> 2;
    current_sp[1] = (2 * current_sp[1] + 2 * next_sp[1]) >> 2;
    current_sp[2] = (3 * current_sp[2] + next_sp[2]) >> 2;
}

If ( packet compensation mode AND in_odd_sub_packet )
{
    CALL smooth_sub_packet and RESEND current_sp
}

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5. The method of claim 1, further comprising the step of inserting interpolated sub packets between every other one of said sub packets in said buffer.

5 6. The method of claim 5, wherein each of said sub packets is of 1 ms duration.

7. The method of claim 1, wherein said step of inserting at least one interpolated sub packet between successive sub packets is only performed when said buffer contains less than a predetermined threshold number of sub packets.

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8. The method of claim 7, wherein said predetermined threshold number of sub packets is equivalent to the number of samples in a single packet buffer.